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# FEATHER FINGERGRASS

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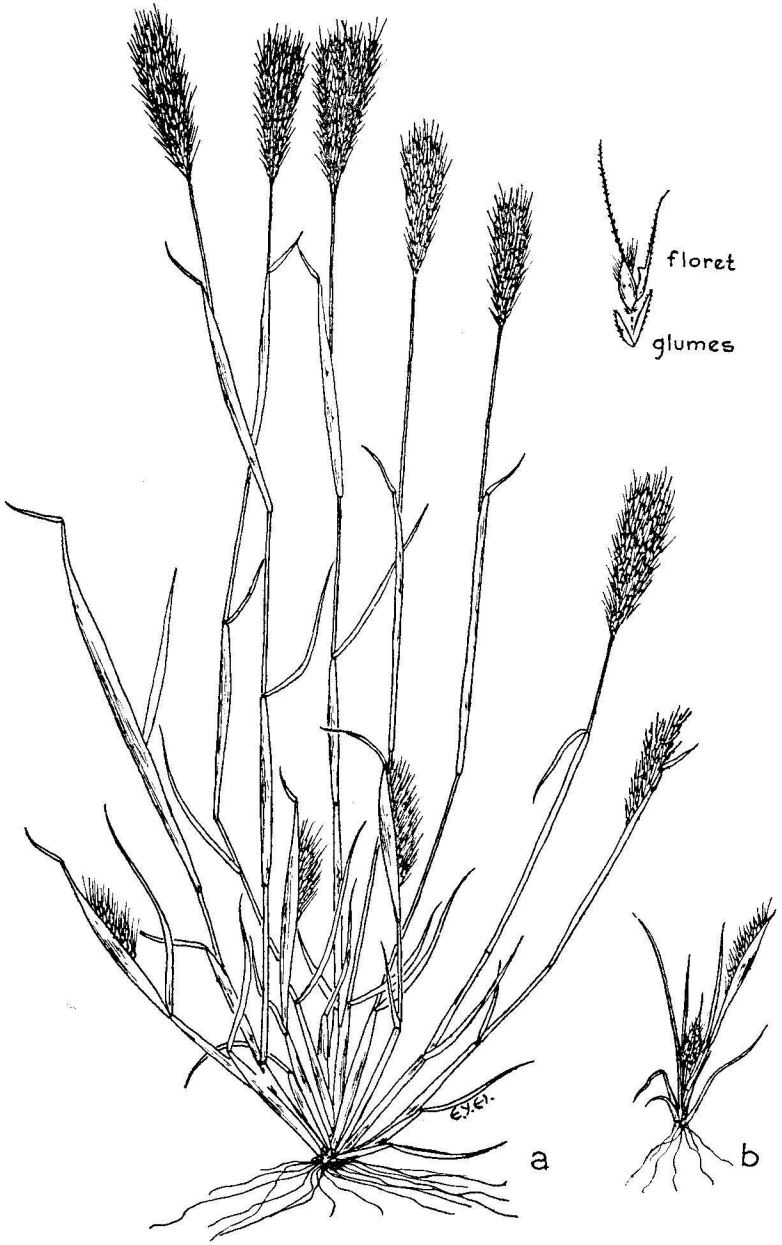


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On Hawaiian grazing lands, the region that needs the most attention is the dryland ranges below about 1,500 feet elevation with less than 25 inches of annual rainfall. This problem area is usually found on the leeward sides of the Islands and covers several hundred thousand acres. The rains usually come during the winter months, from about December to March, as southerly rains (kona storms). The rains are often torrential in nature, and, because of a combination of high evaporation and high runoff on the slopes, the amount actually benefiting the plants must be very low. The air and soil temperature is rather high, registering in the upper seventies and the eighties. The wind erosion is very severe in places because of the poor plant cover. In this zone there is a great need for an adapted, long-life forage species with an extensive, deep root-system or a short-life, palatable species with prolific seeding habits.

One of the few species of grasses that has become conspicuously important in the plant composition of this vast, dry to semidry region is feather fingergrass (*Chloris virgata* Swartz). This is a bunch, short-life grass that develops rapidly after a rain and grows up to 3 feet in height under favorable conditions, producing abundant palatable forage (fig. 1a). The fibrous roots are shallow but very extensive. This grass is related to the Rhodes grass and the swollen fingergrass. If the rainfall is not sufficient to supply the necessary moisture for a normal growth, the plant immediately puts all energy into producing seeds (fig. 1b). Plants about 2 inches high, with flowering heads nearly as long as the plant itself, are often found in the pastures. This grass produces abundant seeds, and, once it is established in the range, it reseeds itself year after year. Moisture is the only limiting factor, and with adequate moisture several generations are produced during a single year. In general, it takes about 30 days for this grass to reach maturity, but often it goes to seed in 20 days when moisture becomes critical.

In 1908 Senator Harold Rice planted a 10-foot-square seed plot of feather fingergrass at Pulehu, Maui, and nursed it along to maturity. He collected seeds and scattered them in the Kahului-Kihei section to speed up the distribution and cover. In these areas and in many other similar areas in the Islands, this grass has taken hold and has increased the forage of the dry lowland ranges.

Feather fingergrass is an excellent pioneer grass. It establishes itself in situations where very few species can take hold. Some of these areas are the dry lowlands where the soils are thin. Its major uses other than as feed are to provide ground cover and to build up soil organic matter. The plant litter retains moisture and makes the ground suitable for the establishment of other longer-life forage plants such as guinea grass, koa haole, buffel grass, fuzzy top, and Caucasian bluestem. Feather fingergrass grows well under the shade of kiawe trees (*Prosopis chilensis*).

About 8 to 10 pounds of seed per acre is enough to get a good stand. In new and renovated pastures, broadcast the seeds soon after the last discing when the ground is loose. The winds and the rains will cover the seeds to ensure good germination. November to early April is the best time to seed in these dry lowlands.

Parker Ranch has established a 2-acre seed plot of feather fingergrass, and mature seeds are collected and scattered over the dryland ranges.

In managing feather fingergrass, it should be grazed when the plants are in the early flowering stage to get the maximum forage return. In areas where the organic matter is being built up, a deferred grazing practice is suggested. This grass is a sufficiently heavy seed producer, and ample seed is provided for re-generation even under fairly heavy grazing.

Feather fingergrass cures well on the stalk, and animals graze it long after the green in the plant has disappeared. The nutritive value is similar to that of Rhodes grass. Senator Rice has raised many beautiful beef animals on feather fingergrass and kiawe beans in the dry Kihei section.

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